

REMARKS

The Office action dated March 21, 2006, has been received and carefully reviewed.

The rejection of claims 1-10 and 14-19 under 35 U.S.C. 102(e) as being anticipated by Hamaoka et al. (U.S. 6,356,073) is respectfully traversed.

Hamaoka et al. discloses a magnetic detection element provided in a magnetic flux detection gap portion. However, the angular position detector of Hamaoka et al. cannot detect direction of the magnetic field. As shown in Fig. 6 or 7 of the Hamaoka et al. patent (as referenced in the Office Action), Hall sensor 31 is positioned between two magnetic stator cores 25. Therefore, the direction of the magnetic lines across the Hall sensor 31 does not change in response to the rotational position of the rotor core 24. Thus, because the Hall sensor 31 is positioned between the stator cores 25, the direction of the magnetic line positions does not change, irrespective of rotation of the rotor core 24.

In contrast, the device of the present invention requires a sensor disposed within the magnetic field of at least two magnets, such that the sensor is arranged and constructed to detect a change of direction of the magnetic field as the magnets and sensor rotate relative to each other. These limitations are not disclosed by Hamaoka et al.

Hamaoka et al. also fails to disclose the presence of at least two magnets, each separated by a gap, as required by the claims.

Accordingly, since Hamaoka et al. fails to disclose or suggest every limitation of independent claims 1 and 16, and claims dependent thereon, the rejection under 35 U.S.C. 102(e) is unsustainable and should be withdrawn.

For the same reasons, Applicants consider that the subject matter of new claims 20-29 is patentable over the cited prior art of record.

The rejection of claims 1-3, 11, 12, and 14 under 35 U.S.C. 102(e) as being anticipated by Schroeder et al. (U.S. 6,614,223) is respectfully traversed.

Schroeder et al. discloses an analog angle encoder having a Hall effect sensor 12 surrounded by a shell 104. The Schroeder et al. reference further discloses that the shell includes a first (116) and second (118) magnetic portion. In other words, the first and second magnetic portion is formed integral with the shell 104. Because the magnets in Schroeder et al. are integral with the shell, they cannot be spaced from each other by a gap.

In contrast, the device of the present invention requires at least two the magnets that are spaced from each other by gaps.

Accordingly, since Schroeder et al. fails to disclose or suggest every limitation of independent claims 1 and 16, and claims dependent thereon, the rejection under 35 U.S.C. 102(e) is unsustainable and should be withdrawn.

For the same reasons, Applicants consider that the subject matter of new claims 20-29 is patentable over the cited prior art of record.

The rejection of claim 13 under 35 U.S.C. 103(a) as being unpatentable over Schroeder et al. (U.S. 6,614,223) is respectfully traversed.

As discussed above in connection with the rejections under Section 102, Schroeder et al. does not disclose or suggest the subject matter of claim 1, as presently amended.

Since claim 13 is dependent on claim 1, it follows that Schroeder et al. also cannot disclose or suggest the subject matter of claim 13.


Accordingly, the rejection of claim 13 under 35 U.S.C. 103(a) is unsustainable and should be withdrawn.

Applicants submit that the application is now in condition for allowance, and an early notice to that effect is

earnestly solicited. If any issues remain that can be clarified by telephone, Examiner Whittington is encouraged to contact Applicants' Representative at the number indicated below.

Applicants hereby petition the Commissioner for Patents to extend the time for reply to the notice dated March 21, 2006, for one (1) month from June 21, 2006, to July 21, 2006. A duly completed credit card authorization form is attached to effect payment of the extension fee.

Respectfully submitted,
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